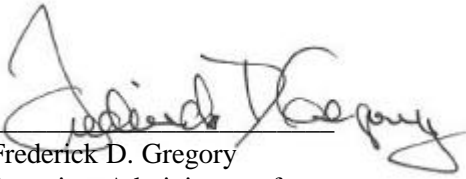# REVISION A

Perform Executive Secretary Responsibilities for the Human Exploration and Development of Space (HEDS) Assurance Board (HAB)

Frederick D. Gregory
Associate Administrator for
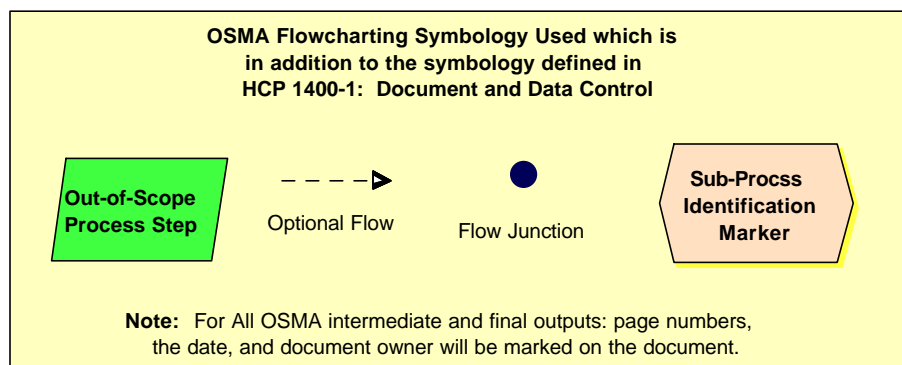Safety and Mission Assurance

April 14, 2000
Date

DOCUMENT HISTORY LOG

Status (Draft/ Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		January 13, 2000	
Revision	A	April 14, 2000	Editorial corrections to the flowchart in Section 5, reference 4.1, step 6.01 and Appendix A; Changed step 6.07.

HOWI Author: QE/Pete Rutledge

OSMA Staff Member Responsible for this HOWI: QE/Pete Rutledge

**OSMA Flowcharting Symbology Used which is
in addition to the symbology defined in
HCP 1400-1: Document and Data Control**

**Out-of-Scope
Process Step**

Optional Flow

Flow Junction

**Sub-Procss
Identification
Marker**

Note: For All OSMA intermediate and final outputs: page numbers,
the date, and document owner will be marked on the document.

1. Purpose

The purpose of this Office of Safety and Mission Assurance (OSMA) Headquarters Office Work Instruction (HOWI) is to document the process for the Executive Secretary function for the Human Exploration and Development of Space (HEDS) Assurance Board (HAB). This HOWI also specifies the Quality Records associated with the process.

2. Scope and Applicability

This OSMA HOWI is applicable to the individual in OSMA who is named to serve as the Executive Secretary (ES) of the HAB and the Code QE Secretary who maintains the Quality Records for the HAB ES.
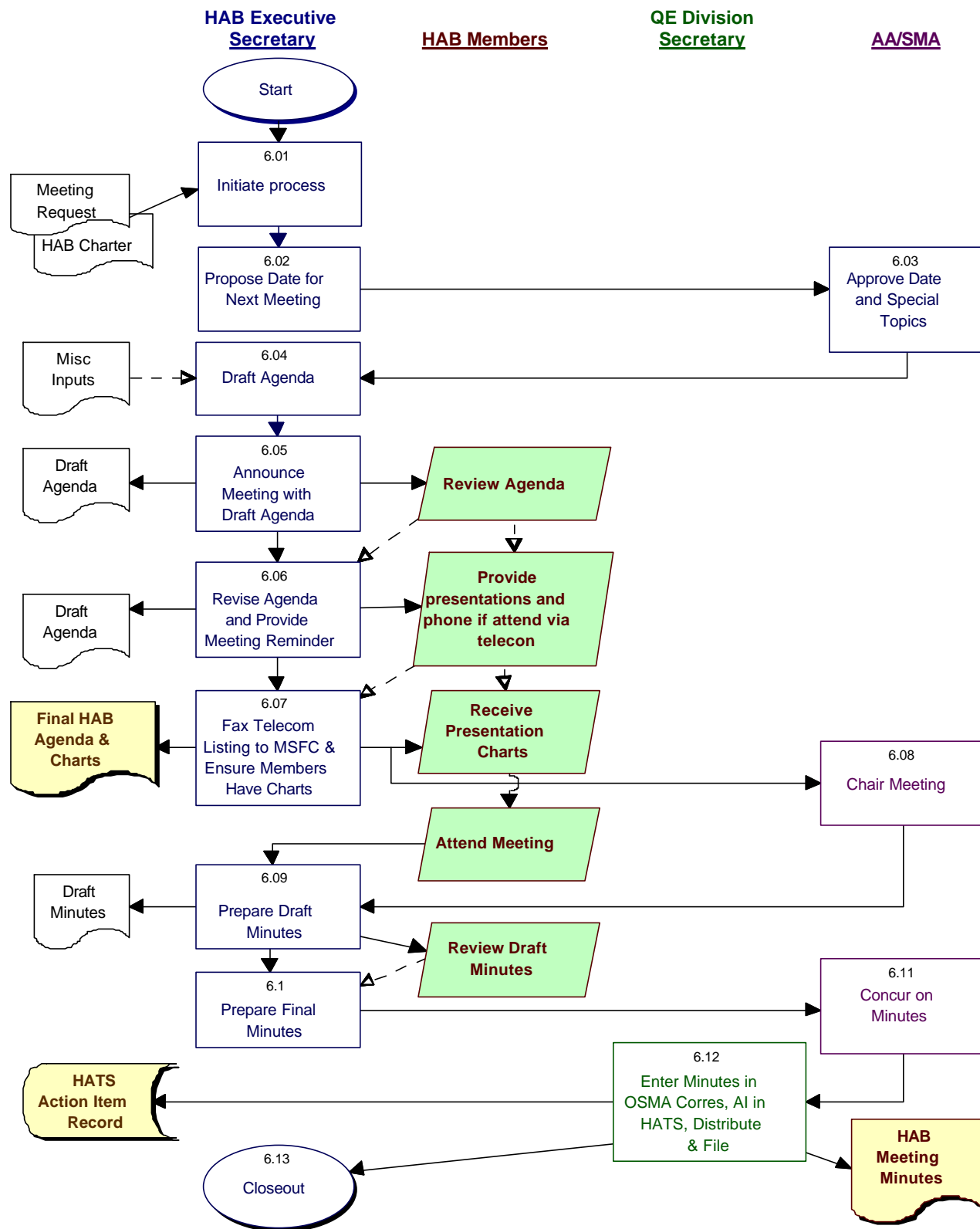
3. Definitions

3.1.   <u>AA/SMA</u>: Associate Administrator for Safety and Mission Assurance

3.2.   <u>AI</u>: Action Item

3.3.   <u>ES</u>: Executive Secretary

3.4.   <u>HAB</u>: HEDS Assurance Board.

3.5.   <u>HATS</u>: Headquarters Action Tracking System

3.6.   <u>HEDS</u>: Human Exploration and Development of Space.

3.7.   <u>OSMA</u>: Office of Safety and Mission Assurance.

3.8.   <u>QE Sec'y</u>: The secretary of the Enterprise Safety and Mission Assurance Division (Code QE)

3.9.   <u>QMS</u>: Quality Management System

4. Reference Documents

The documents listed in this section are used as reference materials for performing the processes covered by the Quality Management System (QMS). Since all NASA Headquarters Level 1 (QMS Manual) and level 2 (Headquarters Common Processes) documents are applicable to the QMS, they need not be listed in this Section unless specifically referenced in this OSMA HOWI.

4.1.   [Safety and Mission Assurance for the Human Exploration and Development of Space (HEDS) Enterprise Agreement](#)

4.2.   MSFC Communications telecon sheet
             (see http://www.hq.nasa.gov/office/codec/codeci/help/telecons/audio.htm).

5. Flowchart

HAB Executive Secretary

HAB Members

QE Division Secretary

AA/SMA

Start

Meeting Request

HAB Charter

6.01
Initiate process

6.02
Propose Date for Next Meeting

6.03
Approve Date and Special Topics

Misc Inputs

6.04
Draft Agenda

Draft Agenda

6.05
Announce Meeting with Draft Agenda

Review Agenda

Draft Agenda

6.06
Revise Agenda and Provide Meeting Reminder

Provide presentations and phone if attend via telecon

Final HAB Agenda & Charts

6.07
Fax Telecom Listing to MSFC & Ensure Members Have Charts

Receive Presentation Charts

6.08
Chair Meeting

Attend Meeting

Draft Minutes

6.09
Prepare Draft Minutes

Review Draft Minutes

6.1
Prepare Final Minutes

6.11
Concur on Minutes

HATS Action Item Record

6.12
Enter Minutes in OSMA Corres, AI in HATS, Distribute & File

HAB Meeting Minutes

6.13
Closeout

6. Procedure

> **Note:**   The NASA Administrator has asked to participate in the HAB Meetings approximately twice a year. The meetings attended by the NASA Administrator are held face-to-face at NASA HQ.

6.01   HAB Executive Secretary (ES)   Initiate Process:

The HAB ES initiates the process in order to prepare for the next regular monthly (or special) meeting of the HAB. HAB meetings are normally held on the first Monday of each month from 3:30 PM to 4:30 PM Eastern Time. A nominal schedule for one HAB meeting is contained in Appendix A.

6.02   HAB ES   Propose Date for Next Meeting:

The HAB ES proposes a HAB meeting date and location. The HAB ES coordinates with AA/SMA's Secretary, to be sure the AA/SMA will be able to attend; otherwise, they jointly determine an alternate date.

6.03   AA/SMA with HAB ES   Approve Date and Special Topics:

The AA/SMA, with the HAB ES, reviews the proposed date for the next HAB meeting. The AA/SMA identifies any special topics which need to be reviewed by the HAB.

6.04   HAB ES   Draft Agenda:

The HAB ES prepares a draft agenda for the meeting. A sample draft agenda is provided in Appendix B-2. Agenda may be changed as needed to accommodate special presentations. The HAB ES will coordinate need for special presentations with AA/SMA. The HAB ES will review the minutes from previous meetings and put any open action items or any open issues from a previous meeting on the agenda for review. Also, the HAB ES will have the Code QE Secretary check the Headquarters Action Tracking System (HATS) (see HOWI 1450-Q027) for any special presentations it might require to close any actions. Other inputs for the HAB agenda may come from a variety of sources such as: mishap investigations, surveys, Aerospace Safety Advisory Panel reviews and the results of Performance Based Mission Assurance reviews.

6.05   HAB ES   Announce Meeting with Draft Agenda:

A meeting announcement, with the draft agenda, is made to all HAB members and invited guests via e-mail approximately two weeks in advance of meeting. The e-mail announcement will also solicit suggested changes from HAB members.

HAB Members should review the agenda and provide suggested changes/additions to HAB ES.

6.06   HAB ES   Revise Agenda and Provide Meeting Reminder:

A reminder e-mail, (sample is provided in Appendix B-1) with the final agenda, is sent to HAB members and invited guests approximately three working days before HAB meeting to:

　　　1.   remind them of the date and time of the meeting,

2. ask them to provide any special phone numbers on which they should be called at the time of the meeting, otherwise the HAB ES will use the same number as the last HAB Meeting, and

3. ask them to send (by fax or e-mail) their viewgraphs to all members in advance of the meeting.

The HAB members notify the HAB ES how they will be attending the HAB meeting. They will also notify the HAB ES of the phone number where they can be reached if attending via telecon.

Any presentations HAB Members will be making are provided to the HAB ES prior to the meeting. Each presenter is responsible for providing the presentations to all HAB Members.

6.07 HAB ES   Fax Telecon Listing to MSFC and Ensure Members have Charts:

A telecon listing is faxed to MSFC Communications (see reference 4.2) on the Friday immediately before the meeting. Updates are made as necessary.

In the final days before the HAB meeting (up to and including the day of the meeting), the HAB ES will collect presentations from the HAB Members. The HAB ES will make paper copies for the AA/SMA, other invited guests, and OSMA staff who will attend the meeting at HQ. Before the meeting, the HAB ES will finalize the Agenda with the AA/SMA and publish the final agenda as a Quality Record.

The HAB ES goes to the meeting room (normally AA/SMA Conference Room) prior to the meeting to receive telecon call to establish the telecon; pre-position the agenda and presentations on the table. The Final Agenda is filed as a Quality Record.

6.08 AA/SMA   Chair Meeting:

The AA/SMA chairs the HAB meeting. At the meeting, the Chair will decide on timeframe, actionee(s) and criteria to close Action Items. Additionally, the Chair decides on the closure of reported Action Items. These decisions will be based on the Chair's professional expertise.

6.09 HAB ES   Prepare Draft Minutes:

The HAB ES takes minutes during meeting and plays any role prescribed by the agenda (such as reviewing action items assigned during the meeting). Within a few days of the meeting, the HAB ES prepares and sends the Draft Minutes to the HAB Members who review them and provide comments to the HAB ES.

Appendix B-2 contains a sample set of HAB Meeting Minutes.

6.10 HAB ES   Prepare Final Minutes of Meeting:

The HAB ES prepares the final minutes of the meeting dispositioning any comments received. The nominal distribution list is shown in Appendix B-2.

6.11 HAB ES with AA/SMA   Concur on Minutes:

The HAB ES provides the minutes of the meeting to the AA/SMA and obtains AA/SMA concurrence prior to release.

6.12 QE Secretary   Enter HAB minutes into OSMA Correspondence Control, Action Items into HATS, Distribute and File:

The minutes are officially recorded and filed. Additionally, any action items for the OSMA Staff are entered in the HATS (See HOWI 1450-Q027)

The QE Secretary distributes the minutes and files them as a Quality Record.

6.13 HAB ES   Closeout:

The HAB ES ensures that all Quality Records are filed/processed and then closes out the process.

7. Quality Records

Record ID	Owner	Location	Media Electronic /hardcopy	Schedule Number & Item Number	Retention & Disposition
Final HAB Agenda and Charts	HAB ES	QE Files	Hardcopy	Schedule: 1 Item: 14.B.1.a	Keep until Final Meeting Minutes approved, verify that is contained in Meeting Minutes then destroy
HATS Action Item Record	HATS Admin	W/in HATS	Electronic	Schedule: 1 Item: 78.C	Keep as long as item has reference value or 1 year then transfer to NASA Historian
HAB Meeting Minutes	HAB ES	QE Files	Hardcopy	Schedule: 1 Item: 14.B.1.a	Retire to FRC when 2 years old then transfer to NARA when 20 years old

Appendix A: Nominal Process Schedule

Meeting - 3 weeks:	Step 6.02
Meeting - 2 weeks:	Step 6.05
Meeting - 3 days:	Step 6.06
Meeting - 1 day:	Step 6.07
Meeting day:	Step 6.08
Meeting + 1 week:	Step 6.15

Appendix B: Sample HEDS Assurance Board (HAB) Documents

B.1.   Sample HAB Meeting Announcement

B.2   Sample HAB Meeting Minutes with Sample HAB Meeting Agenda

Appendix B-1: SAMPLE HAB Meeting Announcement

Date: Tue, 31 Aug 1999 07:24:45 -0400

To: fgregory@hq.nasa.gov, rick.d.husband1@jsc.nasa.gov, amanda.goodson@msfc.nasa.gov, john.l.gasery@ssc.nasa.gov, john.h.casper1@jsc.nasa.gov, brian.k.kelly1@jsc.nasa.gov, alarsen@ems.jsc.nasa.gov, fairejc@kscgws00.ksc.nasa.gov, pete.rutledge@hq.nasa.gov, jholsomb@ems.jsc.nasa.gov, w.j.harris@jsc.nasa.gov

From: Pete Rutledge <prutledg@hq.nasa.gov>

Subject: HEDS Assurance Board TELECON, September 7, 1999

Cc: marla.g.duhon1@jsc.nasa.gov, merrell.mcdaniel1@jsc.nasa.gov, diana.heberling@ssc.nasa.gov, dena.yell@msfc.nasa.gov, maryann.cresap1@jsc.nasa.gov, desiree.m.thompson1@jsc.nasa.gov, annette.loveday@msfc.nasa.gov, sfenn@hq.nasa.gov, jsandin@hq.nasa.gov, whill@hq.nasa.gov, rpatrica@hq.nasa.gov, brian.r.swindells1@jsc.nasa.gov, james.w.wade1@jsc.nasa.gov, merminge@ems.jsc.nasa.gov, sseyl@ems.jsc.nasa.gov, daryl.frank-1@kmail.ksc.nasa.gov, mike.smiles@msfc.nasa.gov

HAB members,

This is a reminder that we will be having our regular monthly meeting via telecon on Tuesday, September 7, 1999, from 3:30 to 4:30 PM, EDT. An agenda is attached. Feel free to suggest other topics that may need to be discussed. Please be sure you provide copies of your presentation charts to the other members prior to the telecon (to do this you can send your charts to the distribution list called "hab@lists.hq.nasa.gov" but only if you are a HAB member; i.e., someone on your staff cannot use this distribution list to send out your charts). You will be contacted at your usual telecon phone number (see attached revised membership listing); if you wish to be contacted on another number, please let me know.

Thanks,

Pete Rutledge

Appendix B-2: SAMPLE HAB Meeting Minutes

TO: Distribution

FROM: Q/Associate Administrator for Safety and Mission Assurance

SUBJECT: Minutes of Human Exploration and Development of Space (HEDS) Assurance Board Meeting,
                    August 9, 1999

The regular monthly meeting of the HEDS Assurance Board was held by telecon on August 9, 1999. Meeting minutes are enclosed.

Frederick D. Gregory

Enclosure

Distribution:
A/Mr. Goldin
Q/Dr. Greenfield
Q-1/Ms. Hilding
QE/Mr. Hill
QE/Mr. Patrican
QE/Mr. Whitnah
M/Mr. Rothenberg
M-1/Mr. Readdy
JSC/AA/Mr. Abbey
    CB/Mr. Bloomfield
    MA/Mr. Harris
    MA2/Mr. Larsen
    NA/Mr. Casper
    NC/Mr. Erminger
    OE/Mr. Holsomback
    OE/Dr. Wade
    QA/Mr. Kelly
KSC/EC/Mr. Fairey
MSFC/CR01/Ms. Goodson
      CR50/Mr. Chesser
SSC/QA00/Mr. Gasery, Jr.

bcc:
Q/Chron File

QE/PRutledge/js:08/27/99 (HEDS)

**Minutes - Human Exploration and Development of Space (HEDS) Assurance Board (HAB) Meeting
August 9, 1999 (Telecon)**

Meeting Attendees:

Participating Members:
Fred Gregory, AA OSMA, Chairperson
Daryl Frank for Chris Fairey, KSC, SMA
Joe Ripma for John Casper, JSC, SR&QA
John Gasery, SSC, SMA
Amanda Goodson, MSFC, SMA
Michael Bloomfield, Space Flight Safety Panel Chairperson
Bill Harris, SSP, SMA Manager
Jerry Holsomback, ISS SMA Manager
Dr. Pete Rutledge, Executive Secretary

Members not represented:
Skip Larsen, Payload Safety
Brian Kelly, Acting HEDS IA Director

Other participants:
Bill Hill, HQ, OSMA
Sharyl Butler, JSC SR&QA
Rick Husband, Astronaut Office, JSC (he will be replacing Mike Bloomfield as HAB member)
Ron Gillette, KSC SMA
Bruce Jansen, KSC SMA

Objective of the Meeting:

To cover the agenda items in appendix A.

Proceedings:

Introductory Remarks. Fred Gregory mentioned a number of the problems from the last Space Shuttle mission that are being worked, including the electrical system problem (which is due to arcing between a wire and a burred screw head) and the main combustion chamber liquid oxygen post plug or pin that may have come loose and struck the nozzle tubes. Fred told Amanda Goodson and Sharyl Butler that discussions of these problems would be appropriate for the next pre-launch assessment review. Fred mentioned recent budget discussions he had been involved in at NASA Headquarters (HQ), including the attempt to define the safety "cross-cut;" i.e., funding attributable to safety across the Agency, both institutional and functional—so far it added up to about $600M or about 5 percent of the Agency's budget. Included in the safety cross-cut expenditures are such things as Shuttle upgrades (e.g., avionics, electric auxiliary power unit), the hold put on Chandra to assure it would perform properly on orbit, the International Space Station (ISS) Propulsion Module, and the Crew Rescue Vehicle.

Fred said that with the emphasis on safety, the Office of Safety and Mission Assurance is now a real player in the budget. He also mentioned the performance standards we have established for Enterprise Associate Administrator, which include mishap rates and a derivative of the Johnson Space Center (JSC) Performance Evaluation Program.

Space Shuttle Transition and/or Post-Transition Status/Metrics/Issues

United Space Alliance (USA) Post-Transition Status/Metrics/Issues. Bill Harris had no charts for presentation. He mentioned he would be briefing the Department of Defense Broad Area Review tomorrow near the end of the day. A Shuttle Program Management Review (PMR) on process change control will take place on August 18-19, 1999, with contractors presenting and focusing on vendor/supplier quality. The plan is to assign actions as a result of the PMR to look for latent problems. Bill met with John Maristch on the supplier assurance contract and it looks to be OK. John Maristch indicated to Bill that there was a $5M under-run in the Defense Contract Management Command contract and Bill considers it a lost opportunity for more surveillance. Bill also stated that we need to talk about critical Safety and Mission Assurance (SMA) skills for the future; i.e., the next 5 or 10 years.

JSC. Sharyl Butler presented the software-related portion of the charts at appendix B (beginning with chart 7). Fred Gregory asked if USA has a requirement for IV&V of software. Sharyl said that Averstar does that and they are contracted out of JSC/MV-2.

Joe Ripma said a decision was made not to roll OV-105/STS-99 until there is further inspection for protection to wire runs from sharp edges. Roll-out will be no earlier than August 11, 1999. Joe presented the remainder of the JSC Safety, Reliability, and Quality Assurance (SR&QA) charts. He said that JSC SR&QA had reviewed and approved or disapproved with comment, all product development plans identified. Some revisions were promulgated by audit findings and the incorporation of audit recommendations.

KSC. Chris Fairey was attending an orbiter roll-out. Daryl Frank presented the charts at appendix C. Daryl said that the SMA reorganization would be official on August 29, 1999. He also expects the KSC SMA Annual Operating Agreement to be completed by the end of the month. KSC SMA is working on getting a support contractor to work government mandatory inspection points (GMIP's). Mike Bloomfield asked about how to train/certify contractors hired to perform GMIP's at KSC. Daryl will talk to Mike off-line. Daryl also addressed Assembly and Refurbishment Facility (ARF) support. There are six MSFC people (Hernandez Engineering, Inc., contractors) on site through FY 2000. There will be eight KSC civil service people through FY 2000. KSC and MSFC SMA are working on a memorandum of agreement which delegates certain MSFC tasks to KSC. Bill Harris said that a plan is needed for October 1, 1999, and beyond. Amanda said that ARF support cannot be zeroed out and that MSFC intends to provide a plan for the future. Fred Gregory asked that the subject of ARF support be kept on the HAB agenda in subsequent meetings. He also mentioned the receipt of some NASA Safety Reporting System reports dealing with ISS Multiple Element Integration Testing. Bruce Jensen said that a comprehensive answer to those would be coming from the ISS program at JSC; Jerry Holsomback agreed.

MSFC. Amanda Goodson asked Tom Hartline to summarize the status of the recent mission problems. Tom said that in attempting to identify the root cause of the nozzle damage, the majority of the fault tree has been closed. A pin from the main combustion chamber injector is a likely cause. We are clear for the next two flights, neither of which will have engines with pinned main injectors. Historically, pins have come out before on five or six engines, but not in flight and no damage to the engine resulted. After the injector on this engine was pinned, the flight was the hot-fire test. Mike Smiles presented the metrics charts at appendix D and indicated that there are no adverse trends.

ISS Status/Metrics/Issues

HEDS Independent Assessment. No report provided at this meeting.

ISS SMA. Jerry Holsomback reported that Greg Baumer is in Russia for the solid fuel oxygen generator review. Russians have been able to replicate the Mir fire by adding contamination and altering the chemical content. Jerry also reported on Brian O'Connor's presentation to the NASA Advisory Council (NAC) on the ISS probabilistic risk assessment (PRA). The NAC invited the program to return in December for an update on the PRA. Sharon Thomas received a fellowship and will be out for a year. There was discussion about a replacement for Colleen Crawford (ISS IV&V) and the need to replace her with a new resident representative at JSC.

Other HEDS SMA-Related Issues

It was noted that the STS-93 crew did not know that there was a low-level cut; if there was a subsequent failure that caused an engine to go into electric lock-up, there would have been a catastrophic shutdown. Nominal situation is to shutdown an electrically or hydraulically locked-up Space Shuttle Main Engine. A potential/proposed change in procedure is to always shutdown a locked-up engine at 23,000 feet per second (approximately 1 minute prior to Main Engine Cut-off) to protect against an automatic shutdown due to a low-level indication (auto) with an engine locked.

Review of Action Items

Action	Assignee	Status
Keep ARF support on subsequent HAB agendas	Chris Fairey	Open
Discuss with Mike Bloomfield the training/certification of contractors performing GMIP's	Daryl Frank	Open

Next Meeting. Telecon on Tuesday, September 7, 1999. Agenda is at appendix e.

Closing. The meeting ended at approximately 4:30 p.m. EDT.

Pete Rutledge, Ph.D.

Executive Secretary   Concurrence:_____

                                       Frederick D. Gregory, AA OSMA, Chairperson

Appendices

HEDS Assurance Board TELECON, August 9, 1999

Time: 3:30-4:30 PM (EDT) or 2:30-3:30 PM (CDT)

<u>Agenda</u>

Introductory remarks   Fred Gregory

Space Shuttle

USA Post-Transition Status/Metrics/Issues   Bill Harris

Transition Status/Metrics/Issues

        JSC   John Casper

        MSFC   Amanda Goodson

        KSC   Chris Fairey

International Space Station (ISS) Status/Metrics/Issues

        ISS Program SMA   Jerry Holsomback

HEDS Independent Assessment   Brian Kelly

Other HEDS SMA-Related Issues   All

Review action items/next meeting   Pete Rutledge

Closing remarks   Fred Gregory